

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) ~~A poxviral~~ An intracellular mature virus (IMV) vaccinia virus particle having a targeted infection specificity towards target cells, wherein:
said ~~poxviral~~ IMV vaccinia virus particle infects said target cells; and wherein
said targeted infection specificity is conferred by the binding of at least one ligand moiety which is localized at the surface of said ~~poxviral~~ IMV vaccinia virus particle to an anti-ligand molecule localized at the surface of said target cells; wherein:
said ~~poxviral~~ particle is an intracellular mature virus (IMV) poxviral particle;
said at least one ligand moiety is a polypeptide comprises an antibody fragment or a binding moiety of a normal cell surface receptor;
and said antibody fragment or binding moiety of a normal cell surface receptor is fused to the N-terminus of the expression product of the vaccinia virus A27L gene a ~~poxviral~~ polypeptide so as to produce a chimeric polypeptide localized at the surface of said IMV ~~poxviral~~ vaccinia virus particle so as to produce a chimeric polypeptide; and
said ~~poxviral~~ polypeptide localized at the surface of said IMV ~~poxviral~~ particle is an expression product of the A27L gene
said anti-ligand molecule is selected from the group consisting of: a cell-specific marker, a tissue specific marker, a viral antigen, and a tumor-associated marker.
2. (Canceled).

3. (Currently Amended) The ~~poxviral~~IMV vaccinia virus particle of claim 2, wherein said IMV vaccinia virus particle is selected from the group consisting of Copenhagen, Wyeth and Ankara modified (MVA) strains.

4. (Canceled).

5. (Currently Amended) The ~~poxviral~~IMV vaccinia virus particle of claim 1, wherein:

said target cells are tumoral cells; and

said ~~ligand moiety binds a tumor-specific antigen~~anti-ligand molecule is a tumor-associated marker; and

~~said tumor-specific antigen comprises a differentially expressed or overexpressed cellular protein selected from the group consisting of: the receptor for interleukin 2 (IL-2), GRP (Gastrin Release Peptide), TNF (Tumor Necrosis Factor) receptor, epidermal growth factor receptors, Fas receptor, CD40 receptor, CD30 receptor, CD27 receptor, OX-40, Vv integrins, receptors for certain angiogenic growth factors, and a gene product of a cancer-associated virus.~~

6. (Currently Amended) The ~~poxviral~~IMV vaccinia virus particle of claim 1, wherein said ligand moiety is a fragment of an antibody capable of recognizing and binding comprises an antibody fragment that recognizes and binds to the MUC-1 antigen.

7. (Withdrawn – Currently Amended) The ~~poxviral~~IMV vaccina virus particle of claim 6, wherein said ~~heterologous ligand moiety~~antibody fragment is the scFv fragment of the SM3 monoclonal antibody.

8–10. (Canceled).

11. (Currently Amended) The ~~poxviral~~IMV vaccina virus particle of claim 1, wherein said ligand moiety further comprises a signal peptide ~~facilitating that facilitates~~ the insertion of said ligand moiety ~~in~~into the envelope of said ~~poxviral~~IMV vaccina virus particle.

12. (Currently Amended) The ~~poxviral~~IMV vaccina virus particle of claim 11, wherein said signal peptide further facilitates ~~allows~~ the translocation of said ligand moiety ~~in~~into the trans-Golgi network.

13. (Currently Amended) The ~~poxviral~~IMV vaccina virus particle of claim 12, wherein said signal peptide is a signal peptide of the human trans-Golgi network glycoprotein TGN51.

14. (Currently Amended) The ~~poxviral~~IMV vaccina virus particle of claim 1, wherein said ~~poxviral~~IMV vaccina virus particle further comprises ~~at least a~~ nucleic acid of interest.

15. (Original) The ~~poxviral~~IMV vaccina virus particle of claim 14, wherein said nucleic acid of interest is a suicide gene.

16. (Withdrawn) A vector comprising at least one nucleotide sequence encoding a chimeric protein comprising (i) at least an heterologous ligand moiety as defined in claim 1, and (ii) all or part of an homologous viral polypeptide naturally localized at the surface of a poxviral particle.

17. (Withdrawn) The vector of claim 16 wherein said homologous viral polypeptide is selected from the group consisting of the expression products of the A27L, L1R, A14L, A17L, D8L and H3L genes.

18. (Currently Amended) A composition comprising at least one ~~poxviral~~IMV vaccina virus particle of claim 1 and a pharmaceutically acceptable vehicle.

19. (Withdrawn) A method for the treatment of a human or animal organism by gene therapy comprising administering an effective amount of the poxviral particle according to claim 1 to a human or animal in need of such treatment.

20. (Withdrawn) A method for the purification of a poxviral particle of claim 1 from a viral preparation containing both said poxviral particle and a wild type poxviral particle, comprising the steps of binding said viral preparation to a solid support coated with an antiligand molecule capable of binding said heterologous ligand moiety and recovering said poxviral particle.

21. (Withdrawn) The method according to claim 20, wherein said binding step is performed by surface plasmon resonance on a dextran support.

22. (Withdrawn) The method according to claim 20, further comprising the step of infecting a permissive cell with said recovered poxviral particle.

23. (Withdrawn) The method according to claim 22, wherein said infection step is performed in the presence of EDTA.

24. (Currently Amended) The ~~poxviral~~IMV vaccinia virus particle of claim 1, wherein at least a portion of the ~~surface-exposed poxviral particle~~ expression product of the vaccinia virus A27L gene is removed and replaced by said ligand moiety.

25. (Currently Amended) The ~~poxviral~~IMV vaccinia virus particle of claim 1, wherein said ligand moiety is incorporated ~~in-into~~ the ~~surface-exposed poxviral~~ expression product of the vaccinia virus A27L gene.

26. (Currently Amended) The ~~poxviral~~IMV vaccinia virus particle of claim 1, wherein said anti-ligand molecule is ~~differentially expressed or overexpressed~~ in said target cells or is a gene product of a cancer-associated virus.

27. (New) The IMV vaccinia virus particle of claim 5, wherein said tumor-associated marker is selected from the group consisting of: a receptor for interleukin 2 (IL-

2), a GRP (Gastrin Release Peptide), a TNF (Tumor Necrosis Factor) receptor, an epidermal growth factor receptor, a Fas receptor, a CD40 receptor, a CD30 receptor, a CD27 receptor, an OX-40, a Vv integrin, an angiogenic growth factor receptor, and a gene product of a cancer-associated virus.